Patient Care Management

A comprehensive platform for delivering health care services through lady health workers

USING MOBILE PHONES TO BRING A BREAKTHROUGH
IN HEALTH CARE DELIVERY

Patient Care Management (PCM) Platform

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PROMOTING SAFE MOTHERHOOD

An overwhelming majority of the children in Pakistan rural areas are born at home, attended by unskilled birth attendants. The quality of care provided is also abysmally sub-standard. It is not surprising that there is a very high Maternal and Neonatal death rates and disabilities in the country each year. According to one recent survey 20% of female deaths were due to complications of pregnancy and childbirth.

Recent trends indicate that over 70% of the mortalities among young mothers are due to two complications, **1) Anemia** and **2) Hypertension**; and both of these are preventable, if properly monitored and timely assistance is provided to the expecting mothers.

Ensuring quality essential maternal and newborn care, skilled birth attendance, prompt recognition of complications and first aid with early and timely referral can improve outcomes for both the mother and the baby.

The global health community has developed low-cost, community-based interventions with proven efficacy for each stage of maternal care: pregnancy, delivery, and postpartum. Under these programs, the Lady health workers have demonstrated a potential to substantially improve health outcomes in areas of extreme poverty.

THE CHALLENGES

The community health programs are difficult to run effectively because of the following factors:

▶ LHWs tend to have little training and operate independently,

▶ The gathered information about patient moves very slow between the capturing point and the back office and

▶ The communication with the expert medical resources is not available or frequent.

▶ Supervisors cannot conduct instant review and monitoring of workers

Using the properly trained Lady Health Workers supported by information and communication capabilities, monitored by supervisors and backed by expert medical advise, it is possible to maximize an organization's capacity to promote safe motherhood, deliver a consistent and high quality care and manage an otherwise disconnected workforce.

AT A GLANCE

A PLATFORM FOR MANAGING HEALTH SERVICES
to reduce mother and infant mortality rate, promoting safe motherhood

ENABLES DELIVERY OF QUALITY CARE
in a timely way through empowered health workers, providing consistant care

PROVIDES A FEEDBACK AND ADVICE MECHANISM
by using faster communication between health worker and central office

CONDUCTS HEALTH SURVEILLANCE
to instantly highlight the patterns, danger signs, emerging conditions

MANAGES LHW WORKFORCE
through monitoring and supervision of the activities and performance

MANAGING HEALTH CARE DELIVERY

By working closely with health care program experts and organizations, we have developed a comprehensive and easy-to-use platform called Patient Care Management or PCM to help the health care providers run the program efficiently while delivering the best quality health care in a consistent and monitored way. The platform enables you to link up the lady health workers, supervisors, medical experts and program managers into a well-connected community to enable improved services through increased communication, information management, performance, cooperation and compliance.

Under this platform, a centralized server cluster maintains a data repository of user and patient databases and activities that become instantly accessible to all relevant information users from the moment data is captured. The data is accessible through mobile and desktop browser applications for the registered users.

PCM platform help manage the process of enrolling, supporting, and tracking every pregnant women in reach of the participating LHWs. These forms are easily adapted for each community health project but generally fill four functions, namely

1. *Registration:* collect demographic information, assess if client is at high risk, and provide educational prompts targeted for her history.

2. *Follow-up:* collect danger-sign questions to identify clients in need of referral, answer checklist of key actions for each client, continue educational prompts.

3. *Referral follow-up:* assess if a referred client's problem has been resolved and advice on next steps, continue educational prompts.

4. *Close form:* assess the mother and infant and collect information for monitoring and evaluation.

PCM keeps a simple history for each client and data from every visit is sent to a centralized server as soon as the LHW enters network coverage. PCM relays information in real-time to supervisors, sends out alerts and reports to managers, and can be linked to health information systems in the ministry of health.

The PCM platform allows the healthcare provider to deliver a high quality patient care, to manage a dispersed workforce and to operate the healthcare delivery program effectively. The system provides interfaces for field health worker, medical expert advisor, workforce supervisors, program management and database officer.

LADY HEALTH WORKER

Each lady health worker uses a cell phone running our field worker application software that makes the job of the worker streamlined and documented. The lady health worker uses the application:

- For adding and updating patient registration and visit information

- To create health awareness and educate the patients by using the latest images and videos

- To get a list of due visits from the central host

- To submit requests for assistance and receive advice

- To view latest messages and instructions from the head office

HEALTH SUPERVISORS

In order to run the program consistently and effectively, it is important that the supervisors and managers keep an oversight on the activities and performance of the workforce. Frequent and rapid feedback to the field workers ensures compliance, quality and consistency over time. PCM supervisor application for cell phone helps provide visibility into the work practices of individual LHWs, to improve workforce management with the many capabilities.

LHW supervisors can assess if LHWs are seeing their prescribed number of clients, following up on recommended interventions, and if cases are being closed in a timely fashion. A list can be viewed showing how many of the patients are overdue for visits or follow-ups on referrals. Supervisors can view schedule of activities for their teams. The performance reports summarize each LHW's recent activity and the overall status of their clients. Supervisor can communicate with the dispersed LHW workforce using the messaging feature of the application.

MEDICAL ADVISOR

Medical experts at the head office uses PCM Medical Advisor interface for viewing highlighted patient master record, visit history and received requests for assistance from field worker.The advisor will be able to issueinstructions for treatmentof the patient directly to the lady health worker for immediate action. Such instructions become part of the patient history that can be reviewed for later reference.

PROGRAM MANAGEMENT

With a standard browser client, the program managers can view the overall status and progress of the program through real time information displays of key indicators and get summary reports on daily, weekly and monthly basis. Surveillance reports highlight the status and emerging situations in regions

A complete MIS reporting system generates key reports including summaries of performance factors, flags, visits, expected deliveries and total born and dead, vaccination status, cases for which supplements are prescribed and TBA assisted deliveries. Surveillance reports highlight the status and emerging situations in region

DATA OFFICER

The data officer at the head office uses internet browser to manage patient record and add new master, update existing, add routine visit readings (data entry and updates) and to update educational material.

THE BENEFITS

The PCM platform's benefits include:

Consistent, high quality care: PCM provides decision support to help LHWs follow protocols they have been trained on. For example, it walks LHWs step by step through important danger signs (e.g., has the baby stopped moving?). It also prompts actions not yet checked off for this client and quizzing for health information (e.g., on proper breastfeeding).

Feedback and Supervision: A key purpose for LHWs entering data into an automated system is to network together an otherwise disconnected workforce and thus amplify the efforts of field- and office- based managers. PCM sends feedback and alerts by email and SMS. It can provide real-time information about, for example, each LHW's activity level, how many of their clients are overdue for visits, and the average time spent working through the forms with clients. PCM produces lists of clients that require attention such as those with open referrals and those due to deliver soon. PCM also acts as an SMS hub to broadcast messages to LHWs and capture their responses and provides a direct feedback mechanism for the LHWs themselves to request new features and report problems and solutions.

Health Surveillance: PCM captures data on what transpired during each registered pregnancy including which of the checklist items were adopted by the client, how each pregnancy ended, and under what conditions each birth occurred. This information is vital to assist in ongoing adaptation of community health programs and provides a wealth of health surveillance

PCM ADVANTAGES

We have customized PCM for each community health program we work with shown below.

- ▶ PCM can be customized for different types of community health programs
- ▶ For each program, custom forms, the information flow and questions can be easily incorporated into the system
- ▶ PCM cell phone applications work on low cost and widely available smartphone type handsets.

  The collected information and generated reports are accessible from anywhere through the Internet
- ▶ The platform is deployed and available for use in less that 10 business days for most programs.

THE RESULTS

Using the capabilities of PCM platform, tangible social and programmatic benefits become much easier to achieve. Within a short period, you can expect the following outcomes:

- ▶ LHWs are able to relate with and engage clients than ever before
- ▶ LHWs are more empowered in their health promotion activities and are better able to follow-up on recommended actions in the checklists.
- ▶ Expert advice is easily available to the LHW
- ▶ Supervisors stay in frequent touch with their teams, providing feedback and guidance

Of course, this idealized set of features needs to be adapted and embraced by each community health program that adopts it. PCM is not a fix for collapsed LHW programs, nor does it diminish the need for supervision and management. Instead, it's a high-powered job aid for LHWs, a way to maximize an organization's capacity for supervision and evidence-based change, and a tool for capturing data in a single electronic repository that otherwise sits in thousands of paper notebooks.

ABOUT PHONECAST

Phonecast is a technology solutions and research company that specializes in contact management, eHealth, Distant Learning and Market Research. Phonecast has vast project experience with media, public and corporate sector, mobile & telecom companies, donors & grant agencies. The company collaborates with partners from USA, UK, Romania, Korea, Germany, UAE and Bangladesh. It specialize in

- IPTV - International TV Channel Operators
- Hybrid (Live/Recorded) Video transmission over broadband
- Consultants: e-learning and e-training using live IP Video
- Voice Information Service Bureau
- Electronic Media Rating through Telephone Interface
- 0900 / 0800 /SMS Call Handling Services
- International Call Center (Inbound & Outbound)
- E-Health Tele Center & Remote Patient Monitoring Services
- Video & Audio Conference service providers
- Donation campaigns, research and surveys

Since inception, Phonecast has positioned itself to be a major player for majority of TV channels on call handling and viewers interaction through ICT. Phonecast holds license of Call Center and Class C Value Added services from telecom regulatory authorities. It has conducted major national awards, National Elections, and recent Flood Donation campaign with Imran Khan's PUKAAR NGO where generated pledges worth over PKR 320 million. Phonecast has deployed the CallDoc brand, an e-health service entity, specializing in Tele-health based wireless medical sensing platform in collaboration with partner service providers network. Phonecast is also engaged in Pakistan's first e-mobile clinic through live video communication using wireless broad band and WIFI. For more information, visit www.phonecast.tv

PHONECAST IN mHEALTH

- Establish first Medical Call Center with Pakistan Medical Association –PMA and Radio Pakistan– in 2007.
- Worked with USAID –John Hopkin's initiative for Mothercare called PAIMAN for 13 districts of Pakistan- in 2008-9
- First to launch an Inbound medical support service for Overseas Pakistani expats in UAE in 2009
- Awarded support and grant from Asian Development Bank (ADB) for HIMS (Hospital Information Medical Systems)
- Its Mother & Child e-Health project have been recommended for grant from Research & Advocacy Fund – DIFID-UK funded initiative
- Pakistan's only ISO 9001-2008 certified Medical Call Center by TQSI.
- Phonecast Mother & Child tele health project nominated for Gold medals in 3 categories, in Contact Center Awards 2010, Gold Coast, Australia
- India's largest e-India awards 2010 nominated Phonecast –Mother & Child project in the best private sector ICT based health initiative in the region.
- During the devastating floods in Pakistan it operated the first E Health support line with Pakistan Television and Ziauddin University and Hospital for Flood Stricken locations, In 30 days, this help line covered 80% of the flood effected locations solving more than 1500 cases by providing them first level support and guidance on basic and preventive health issues.

Partners with

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